UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/563,220	01/03/2006	Takashi Kamiya	Q91974	1492

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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/563,220	KAMIYA ET AL.
	Examiner	Art Unit	
	Sean P. Shechtman	2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>03 October 2007</u>.

2a)☐ This action is **FINAL.** 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle,* 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>10-19</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>10-19</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>03 January 2006</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>10/3/07; 12/7/06.</u>

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☒ Other: <u>IDS filed 1/3/06.</u>

DETAILED ACTION

Election/Restrictions

1.   The restriction requirement between inventions I, II, III, and IV as set forth in the Office

action mailed on 7/27/07, has been reconsidered. **The restriction requirement is hereby**

withdrawn. In view of the above noted withdrawal of the restriction requirement, applicant is

advised that if any claim presented in a continuation or divisional application is anticipated by, or

includes all the limitations of, a claim that is allowable in the present application, such claim may

be subject to provisional statutory and/or nonstatutory double patenting rejections over the

claims of the instant application. Once a restriction requirement is withdrawn, the provisions of

35 U.S.C. 121 are no longer applicable. See *In re Ziegler*, 443 F.2d 1211, 1215, 170 USPQ 129,

131-32 (CCPA 1971). See also MPEP § 804.01.

Information Disclosure Statement

2.   The listing of references in the specification is not a proper information disclosure

statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information

submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be

incorporated into the specification but must be submitted in a separate paper." Therefore, unless

the references have been cited by the examiner on form PTO-892, they have not been considered

(See page 46, lines 6-7).

Claim Objections

3.   Claims 13, 19 are objected to because of the following informalities: Referring to claim

13, line 12, the phrase "corresponding to specified machining unit name", should be

"corresponding to the specified machining unit name". Referring to claim 19, lines 13-14, the

phrase "corresponding to specified machining unit name", should be "corresponding to the

specified machining unit name". Appropriate correction is required.

Claim Rejections - 35 USC § 112

4.   Claims 10-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for

failing to particularly point out and distinctly claim the subject matter which applicant regards as

the invention.

Claims 10, 13-16, 19 recite the limitation "the machining unit name specified on the

machining shape tree" (for example, see claim 10, lines 11-12). There is insufficient antecedent

basis for this limitation in the claim. For purposes of examination, it will be assumed that the

machining unit name specified on the machining shape tree is one of the machining unit names

being specified on the machining shape tree.

Claims 10, 13-16, 19 recite the limitation "the machining program name specified on the

program tree" (for example, see claim 10, lines 11-12). There is insufficient antecedent basis for

this limitation in the claim. For purposes of examination, it will be assumed that the machining

program name specified on the program tree is one of the machining program names being

specified on the program tree.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the

claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c)

and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5.   Claims 10-12, 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.

Pat. No. 6,219,055 to Bhargava et al (hereinafter referred to as Bhargava) in view of U.S. Pat.

No. 6,584,373 to Guenther et al (hereinafter referred to as Guenther), and further in view of U.S.

Pub. No. 2003/0195642 to Ragnini (hereinafter referred to as Ragnini).

Referring to claims 10-12, 14-18, Bhargava teaches a method, system and computer-

readable recording medium that stores therein a computer program for plurality of machining

units (Col. 6, lines 49-62; Figs. 4A, 4B, cut, drill), by using a program editing screen including

a machining shape tree on which a plurality of machining unit names indicating a

machining shape of the machining unit, as a unit of machining in which continuous machining is

performed with the same main spindle and with the same tool, is displayed hierarchically

according to a machining order; (Figs. 4A, 4B; Col. 7, lines 11-45, graphical browser portion 64

and 64'),

a model display section in which a product model (Fig. 14; Col. 10, lines 35-45), a work

model (Figs. 4A, 4B, Col. 7, lines 11-45, modeling portion 62 and 62') and a machining shape

model corresponding to the specified machining unit (Fig. 13, Col. 10, lines 12-34) are displayed

three-dimensionally,

an editor section in which machining unit data corresponding to the machining unit name

specified on the machining shape tree is displayed to perform editing (Fig. 10, element 96; Col.

9, lines 44-55), the computer program causing the computer to execute:

displaying a machining unit corresponding to a cursor position in the editor section (Fig.

10, Rear Cut; Col. 9, lines 44-55) and in any one of the product model and the work model or

both displayed in the model display section in a highlighted manner (Fig. 10, Rear Cut in

element 64 is highlighted therefore highlighting the rear cut of element 62, see Col. 9, lines 44-

55; Col. 8, lines 33-44; Col. 8, lines 13-32);

inserting machining shape information corresponding to a specified shape element

required for forming the machining unit data with respect to the machining shape model

displayed in the model display section in a cursor position specified in the editor section (Fig. 10,

element 96, Rear Cut; Col. 9, lines 44-55; and/or Fig. 12, fillet features); wherein the inserting

includes inserting machining unit data corresponding to the machining unit relating to the

machining shape model specified in the model display section at the cursor position (Fig. 10,

element 96, Rear Cut; Col. 9, lines 44-55).

Referring to claims 10-12, 14-18, Bhargava teaches all of the limitations set forth above,

however fails to teach automatic programming for an NC creation program-editing function for

editing an NC creation program including a plurality of machining units and a machining

program for each machining unit, and a program tree on which a plurality of machining program

names relating to the respective machining units is displayed hierarchically according to the

machining order. Referring to claims 10-12, 16-18, Bhargava fails to teach the machining

program corresponding to the machining program name specified on the program tree are

displayed to perform editing.

However, referring to claims 10-12, 14-18, Guenther teaches automatic programming for

an NC creation program including a plurality of machining units and a machining program for

each machining unit, and a program tree on which a plurality of machining program names

relating to the respective machining units is displayed hierarchically according to the machining

order (Fig. 1, element 1; Col. 4, lines 32-43; Fig. 3, Col. 5, lines 36-52).

Bhargava and Guenther are analogous art because they are from the same field of

endeavor, machining.

Therefore it would have been obvious to one of ordinary skill in the art at the time that

the invention was made to combine the program tree and creation of Guenther with the

machining modeling of Bhargava. One of ordinary skill in the art would have been motivated to

combine these references because Guenther teaches a program tree which permits a simple

changing of programs and by way of this a high flexibilisation. Furthermore, Guenther teaches

that by recognizing that the function control of a machine within a sequence does not change in

machines with cyclically recurring sequences, and thus a master-slave principle may be used,

therefore the hierarchies between the central control unit and the NC control unit may be fixed

more unambiguously than with the known CNC control systems. Furthermore, since the

individual function modules during a single sequence of the NC program may be called up

several times, each processing function only needs to be carried out once in the NC program,

therefore, the NC program according to the invention is thus simply constructed and does not

unnecessarily require memory space and the danger of program call-ups leading to undesired

interruptions of the subject machining procedure is avoided (Col. 2, lines 43 – Col. 4, lines 7).

However, referring to claims 10-12, 14-18, Bhargava in view of Guenther fails to teach

an NC creation program-editing function for editing an NC creation program. Referring to

claims 10-12, 16-18, Bhargava in view of Guenther fails to teach the machining program

corresponding to the machining program name specified on the program tree are displayed to

perform editing.

However, referring to claims 10-12, 14-18, Ragnini teaches an NC creation program-

editing function for editing an NC creation program (Page 2, paragraph 27-28, 34; Page 3,

paragraph 34). Referring to claims 10-12, 16-18, Ragnini teaches a machining program

corresponding to a machining program name specified on a directory are displayed to perform

editing (Pages 2-3, paragraph 33-34; Page 3, paragraph 43; Page 2, paragraph 27-28).

Bhargava in view of Guenther and Ragnini are analogous art because they are from the

same field of endeavor, machining.

Therefore it would have been obvious to one of ordinary skill in the art at the time that

the invention was made to combine the programming of Bhargava in view of Guenther with the

program editing of Ragnini. One of ordinary skill in the art would have been motivated to

combine these references because Ragnini teaches users can load software for managing user

preferences, storing and editing G-code sequences, such that the user can customize the G-code.

Furthermore, Ragnini teaches users can define up to 1000 unique CNC machine profiles, and can

store up to 1000 unique G-code programs within each machine profile, and the profiles and G-

code programs can be easily and safely stored using readily available one-touch synchronization

software (Page 1, paragraph 5-6).

Allowable Subject Matter

6.   Claims 13, 19 would be allowable if rewritten or amended to overcome the rejection(s)

under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

The following is a statement of reasons for the indication of allowable subject matter:

While, Bhargava teaches a method, system and computer-readable recording medium that

stores therein a computer program for plurality of machining units (Col. 6, lines 49-62; Figs. 4A,

4B, cut, drill), by using a program editing screen including a machining shape tree on which a

plurality of machining unit names indicating a machining shape of the machining unit, as a unit

of machining in which continuous machining is performed with the same main spindle and with

the same tool, is displayed hierarchically according to a machining order; (Figs. 4A, 4B; Col. 7,

lines 11-45, graphical browser portion 64 and 64'), a model display section in which a product

model (Fig. 14; Col. 10, lines 35-45), a work model (Figs. 4A, 4B, Col. 7, lines 11-45, modeling

portion 62 and 62') and a machining shape model corresponding to the specified machining unit

(Fig. 13, Col. 10, lines 12-34) are displayed three-dimensionally, an editor section in which

machining unit data corresponding to the machining unit name specified on the machining shape

tree is displayed to perform editing (Fig. 10, element 96; Col. 9, lines 44-55).

And, Guenther teaches automatic programming for an NC creation program including a

plurality of machining units and a machining program for each machining unit, and a program

tree on which a plurality of machining program names relating to the respective machining units

is displayed hierarchically according to the machining order (Fig. 1, element 1; Col. 4, lines 32-

43; Fig. 3, Col. 5, lines 36-52).

And, Ragnini teaches an NC creation program-editing function for editing an NC creation

program (Page 2, paragraph 27-28, 34; Page 3, paragraph 34), and a machining program

corresponding to a machining program name specified on a directory are displayed to perform

editing (Pages 2-3, paragraph 33-34; Page 3, paragraph 43; Page 2, paragraph 27-28).

Furthermore, while Ragnini teaches a display for editing a program and a program name (Page 2,

paragraph 27-28), the program name does not correspond to the machining unit name specified

in the editor section of Bhargava.

Referring to claim 13, 19, none of Bhargava, Guenther or Ragnini, taken either alone or

in obvious combination disclose an automatic programming method and device having all the

claimed features of applicant's instant invention, specifically including: an insertion unit that

inserts a machining program name corresponding to the specified machining unit name in an

insertion position specified on the program tree, and inserts a machining program corresponding

to the specified machining unit name in an insertion position specified in the editor section.

Also, there is no motivation to combine Bhargava, Guenther or Ragnini to meet these limitations.

It is for these reasons that applicant's invention defines over the prior art of record.

Conclusion

7.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Sean P. Shechtman whose telephone number is (571) 272-3754.

The examiner can normally be reached on 9:30am-6:00pm, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P. Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SPS

Sean P. Shechtman

October 25, 2007　　　10/25/07